# Silicon Rectifier
# 1.0A DO-41 Axial Leaded

1N400x Series

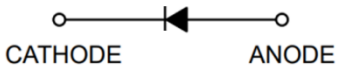
MERITEK

## FEATURES

- Reverse Voltage: 50V~1000V
- Surge Overload Rating to 30A Peak
- Low Forward Voltage Drop
- Low Reverse Leakage
- Glass Passivated Die Construction

## MECHANICAL DATA

- Case: DO-41, Molded Plastic
- UL Flammability Classification Rating 94V-0
- Lead: Axial leads, Solderable per MIL-STD-202, Method 208
- Polarity: Color Band Denotes Cathode End




RoHS

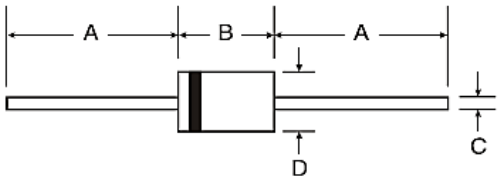
## ELECTRICAL CHARACTERISTICS

| Parameter | | Symbols | 1N 4001 | 1N 4002 | 1N 4003 | 1N 4004 | 1N 4005 | 1N 4006 | 1N 4007 | Units |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent, Peak Reverse Voltage | | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at $T_A$=75°C | | $I_{(AV)}$ | 1.0 | | | | | | | A |
| Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method) | | $I_{FSM}$ | 30.0 | | | | | | | A |
| Maximum Forward Voltage, at 1.0A DC and $T_A$=25°C | | $V_F$ | 1.1 | | | | | | | V |
| Maximum Reverse Current at Rated DC Blocking Voltage | $T_A$=25°C | $I_R$ | 5.0 | | | | | | | μA |
| | $T_A$=100°C | | 50 | | | | | | | |
| Typical Junction Capacitance | | $C_J$ | 15 | | | | | | | pF |
| Typical Thermal Resistance | | $R_{\theta JA}$ | 50 | | | | | | | °C/W |
| Maximum Reverse Recovery Time | | $T_{RR}$ | 200 | | | | | | | ns |
| Operating and Storage Temperature Range | | $T_J$, $T_{STG}$ | -55 to +150 | | | | | | | °C |

Note:
1. Ratings at 25°C ambient temperature unless otherwise specified.
2. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.
3. Measured at 1.0 MHz and applied reverse voltage of 4.0 VDC.
4. Thermal Resistance from junction to ambient and from junction to lead at 0.375"(9.5mm) lead length, P.C.B. Mounted.

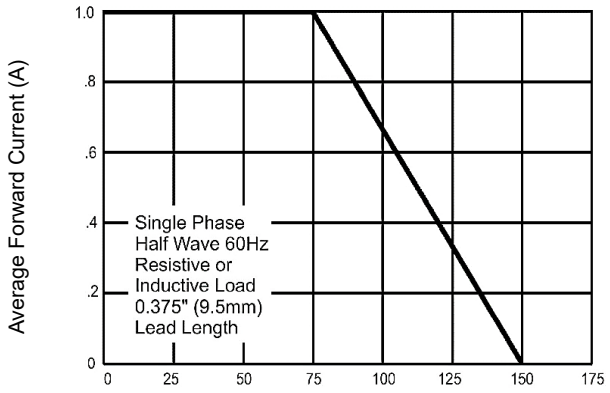
## DIMENSIONS

| DO-41 | Min (mm) | Max (mm) |
|---|---|---|
| A | 25.4 | - |
| B | 4.2 | 5.2 |
| C | 0.7 | 0.9 |
| D | 2.0 | 2.7 |

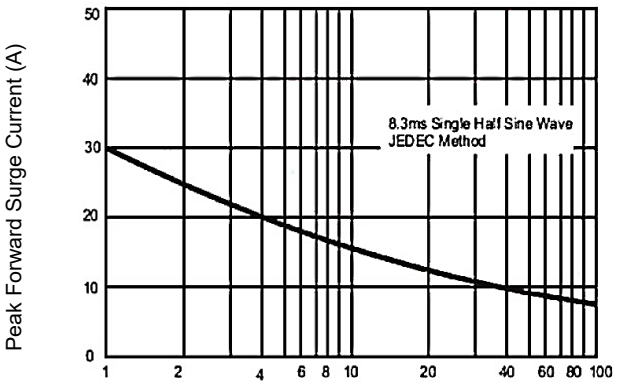


## CHARACTERISTIC CURVES

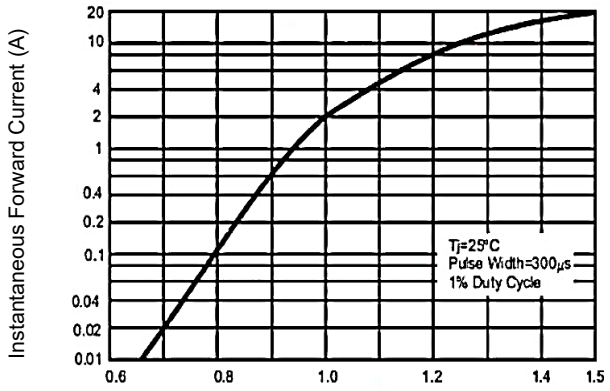
**Typical Forward Current Derating Curve**



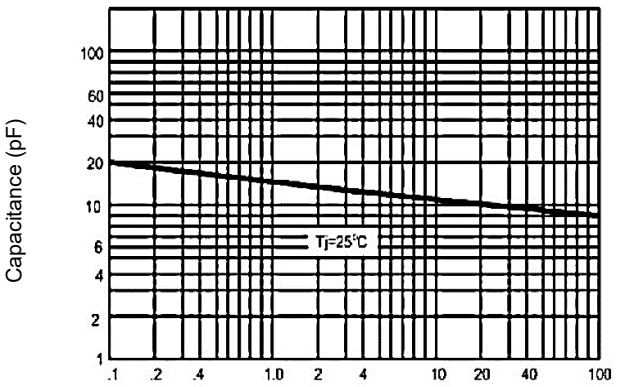

**Maximum Non-repetitive Forward Surge Current**



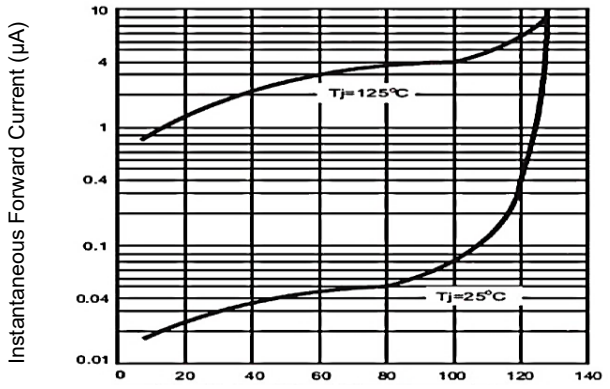

**Typical Forward Characteristics**




**Typical Junction Capacitance**




**Typical Reverse Characteristics**




*Specifications subject to change without notice